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EXAMINER

CHANNAVAJJALA, LAKSHMI SARADA

ART UNIT PAPER NUMBER

1615

DATE MAILED: 07/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/092,530

Applicant(s)

DUBIEF ET AL.

Examiner

Lakshmi S Channavajjala

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 30-67 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 30-67 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/051,793.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other:

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### DETAILED ACTION

1. Receipt of Information Disclosure Statement, preliminary amendment A and preliminary amendment B, all dated 3-8-02 is acknowledged.

#### *Status of Claims*

2. Claims 1-29 have been canceled. Claims 30-67 are pending.

#### *Claim Rejections - 35 USC § 112*

3. Claim 30 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Instant claim recites "at least one silicone polymer with a polysiloxane skeleton", which is vague and indefinite because the claim does not clearly state if the composition contains at least one silicone polymer along with another polysiloxane skeleton grafted with non-silicone organic monomers or if the at least one silicone polymer has a silicone skeleton grafted with non-silicone organic monomers. Examiner interprets the claim as "at least silicone polymer having a polysiloxane skeleton, which is grafted with non-silicone organic monomer". A clarification and appropriate correction is requested.

#### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

**4. Claims 30-32, 44-67 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of U.S. Patent No. 5,637,306 (hereafter '306) in view of US patent No. 5,417,965 (hereafter '965).**

Instant composition requires a grafted silicone with a polysiloxane skeleton, grafted with non-silicone organic monomers and an aqueous dispersion of insoluble particles of at least one cationic polymer. The claims of '306 patent are directed to a method of cosmetic treatment comprising topical application of an aqueous dispersion of organopolysiloxanes and one cross linked methacryloyloxyethyl trimethylammonium chloride. Among the organopolysiloxanes, '306 claims recite organomodified polysiloxanes, which contain one or a number of organofunctional groups directly attaché to the chain or attached via a hydrocarbon radical (see claim 2 of '306). Thus, the organomodified polysiloxanes of '306 include the grafted silicone polymer with a polysiloxane skeleton grafted with non-silicone organic monomers of the instant claims. Further, '306 also recite the presence of additional components such as those claimed in the instant invention i.e., surfactants, sunscreens etc., in the composition. The composition of '306 is intended for the same treatment as that of the instant i.e., treatment of hair in the form of a shampoo, styling product or permanent waving etc.

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'306 do not definitively state that the cross-linked methacryloyloxyethyl trimethylammonium chloride polymer is a cationic polymer. However, '306 describes that the claimed polymer is marketed under the name of Salcare SC 92.

'965 teach hair-conditioning compositions comprising cationic polymer, anionic surfactant, silicone and cationic conditioning agents. '965 teach Salcare SC 92 as the cationic conditioning agent, which is a copolymer of acrylate/acrylamide a polymer (Polyquaternium-32). Thus, the cross-linked methacryloyloxyethyl trimethylammonium chloride polymer of '306 patent is cationic in nature.

Therefore, it would have been obvious for one of an ordinary skill in the art at the time of the instant invention to use the composition of '306, containing aqueous dispersion of organomodified silicone polymer and cross linked methacryloyloxyethyl trimethylammonium chloride polymer (Salcare SC 92) because '965 teaches Salcare SC 92 is a cationic polymer and '306 teaches that a combination organomodified silicones and cationic polymer, similar to that claimed in the instant invention, provides a shiny, silky, light hair, without disentangling or sticky effect on the hair.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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**5. Claims 30-32, 44-50, 52-62 and 64-66 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 94/21224 to Cauwet et al (hereafter WO '224) in view of US 5,417,965 to Janchitraponvej et al (hereafter '965).**

**Briefly, Instant claims are directed to a composition comprising at least one grafted silicone polymer with a polysiloxane skeleton grafted with non-silicone monomers and at least one aqueous dispersion of insoluble particles of at least one cationic polymer. Claims 65 and 66 are directed to a process of treating keratin fibers using the above composition.**

WO '224 discloses a cosmetic composition comprising an aqueous dispersion of an acrylamide homopolymers or a copolymer of cross-linked methacryloxyethyl trimethylammonium chloride and a non-volatile organopolysiloxane such as polyalkylsiloxanes, polyarylsiloxanes or organomodified polysiloxanes. Since the WO '224 reference is in French, a US equivalent of the WO '224 reference, USPT 5,637,306 (hereafter '306), has been relied upon. WO '224 discloses the composition for the treatment of hair, to obtain shiny, silky hair. The stable composition, with improved hold properties of the composition is obtained by the aqueous dispersion (col. 1 of US '306). WO '224 discloses that the organofunctional groups of organomodified polysiloxane are attached directly to the polysiloxane skeleton or indirectly attached via a hydrocarbon radical. Thus, the general structure of the organomodified polysiloxanes disclosed by WO '224 meets the description of grafted polymer polysiloxanes in instant claims 30-32. In particular, example 3 of WO '224 (also example 3 of '306) recites organomodified polysiloxane, x-22-820. With respect to the claimed cationic polymer, WO '224 does not explicitly state that the acrylamide homopolymer or the copolymer of cross-linked methacryloxyethyl trimethylammonium chloride is cationic in nature. However, WO '224

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discloses that the polymer is sold under the trade name of Salcare SC 92 by Allied Colloids (col. 4, lines 6-20 of US '306). '965 teach that Salcare SC 92 acrylate/acrylamide copolymer from Allied Colloids is a cationic polymer.

WO '224 also discloses other additives such as surfactants, thickeners etc., and solvents of the instant claims (col. 4), in the hair care composition. The instant hair styling products, in the form of cream, milk, lotion etc., for hair waving or hair setting are also disclosed by WO '224 (col. 4, lines 48-65 of US '306). Thus, WO '224 anticipates instant composition and process claims.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**6. Claims 30-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 93/23009 to Kumar et al (hereafter WO '009) in view of US 5,417,965 to Janchitraponvej et al (hereafter '965).**

WO '009 teaches cosmetic compositions containing vinyl silicone graft or block copolymers. In particular, WO '009 teaches skin care and hair care compositions and teaches that the silicone polymers when incorporated in hair care compositions impart excellent brilliance, gloss, conditioning and style retention to hair without stiff or sticky feel (page 7, lines 17-20). The vinyl-silicone copolymer of WO '009 contains a silicone backbone with a vinyl polymeric segment grafted on to the backbone (structure on page 8). The vinyl polymeric segment represented by "A" includes the claimed monomers of instant claims 33-39 (pages 11-14). Applicants also admit that the claimed polysiloxane polymers are taught by WO '009 (page 1, lines 21-26). Further, WO '009 teaches 0.01% to 30% by weight of vinyl-silicone copolymers in hair care products such as shampoos, hair rinses, hair setting products (pages 40-41). WO '009 teaches the hair care products in the form of liquid, cream, gel, rinse-off or leave-on products etc. WO '009 also teaches aerosol sprays, pump sprays etc., for setting hair in the desired style (page 41).

WO '009 teaches that the vinyl-silicone polymers can be used in combination with conventional polymers such as anionic, cationic or amphoteric polymers (page 42, lines 21-26). However, WO '009 fails to teach aqueous dispersion of insoluble particles of at least one cationic polymer of the instant claims.



'965 teaches a hair conditioning composition comprising a combination of cationic polyethyleneimine, a cationic, oil-soluble, water-dispersible cross-linked quaternary acrylate/acrylamide copolymer (Polyquaternium 32), silicone conditioning agents and an anionic surfactant in an aqueous emulsion (col. 4, lines 32-67 and examples 1-3). '965 also teaches the cosmetic additives and solvents of the instant claims 54-57 (col. 10, lines 41 through col. 11 and examples). '965 teaches that while the presence of silicones in hair conditioning compositions in general present a problem of reducing the foaming of anionic cleansers, their compositions containing cationic polymers provide hair with improved physical properties such as gloss, thickness, softness, manageability and with excellent cleansing at high foam levels (col. 2, lines 51 through col. 3, line 26).

Therefore, it would have been obvious for one of an ordinary skill in the art at the time of the instant invention to add the water-insoluble dispersion containing cationic acrylate/acrylamide polymer conditioning agent of '965 to the vinyl-silicone polymer containing hair care composition of WO '009, because '965 suggests that the combination of cationic polymers, polyethyleneimine and acrylate/acrylamide, provides excellent cleansing of hair while still providing high foaming and conditioning of the hair. '965 do not teach the specific cationic polymers of claim 51. However, choosing an appropriate acrylate/acrylamide cationic polymer in the conditioning composition of WO '009 with an expectation to provide high foam and cleansing ability would have been obvious for one of an ordinary skill in the art because '965 teaches that the cleansing ability is imparted by the cationic nature of the polymers.

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**7. Claims 33-43, 63 and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 94/21224 (WO '224) in view of WO 93/23009 (hereafter '009).**

WO '224, described above, teaches a hair treating cosmetic composition comprising an aqueous dispersion of an acrylamide homopolymers or a copolymer of cross-linked methacryloxyethyl trimethylammonium chloride, and a non-volatile organopolysiloxane such as polyalkylsiloxanes, polyarylsiloxanes or organomodified polysiloxanes. WO '224 fails to teach the specific polysiloxanes of the instant claims 33-42. WO '224 also lacks the packages of instant claims 63 and 67.

WO '009, described above, teaches the organopolysiloxanes with silicone backbone on to which are grafted organic monomers. The organic monomers of WO '009 read on the instant organic monomers (pages 11-13). Applicants also state in the instant specification that the suitable polysiloxanes for the instant invention are described by WO '009 (page 4, lines 23-28). Further, WO '009 suggests using pump sprays; aerosol hair sprays to deliver the hair care compositions containing polysiloxanes (page 41, lines 1-18). Therefore, it would have been obvious for one of an ordinary skill in the art at the time of the instant invention to incorporate the silicone polymers of WO '009 i.e., silicone polymers having polysiloxane skeleton with organic monomers, such as anionic, cationic, nonionic monomers, grafted on to the silicone chain, as organomodified silicones in the hair composition of WO '224 because WO '009 suggests that the silicone polymers grafted with organic monomers provide brilliance, gloss, conditioning of the hair and style retention (page 8, lines 7-10).

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*Specification*

The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text. The first sheet of WO patent, WO 97/14400, submitted by applicants as abstract is not acceptable.

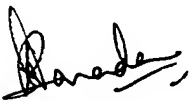
Examiner also notes that the title of the instant invention is too lengthy. It is suggested to applicants to present an appropriate title of 10-12 words.

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lakshmi S Channavajjala whose telephone number is 703-308-2438. The examiner can normally be reached on 7.30 AM -4.00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K Page can be reached on 703-308-2927. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7924 for regular communications and 703-308-7924 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1235.



Lakshmi S Channavajjala  
Examiner  
Art Unit 1615

June 28, 2002